

2021 Annual Symposium – 15th September 2021

***Possibilities, benefits and limitations of
embedding technology enhanced and remote
teaching and learning in compulsory education
– And not just because of Covid-19***

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In this session

- *The past – the potential for technology enhanced teaching and learning*
- *The present - what has changed during the Covid-19 pandemic*
- *The future – taking forward lessons for the next phase*

A context

- There is quite a long history of research that has been published in the field of technology enhanced teaching and learning in compulsory education, spanning a period of some four decades
- Some of that research indicates that the overall evidence base that could identify positive impact upon teaching and learning from uses of digital technologies is not always clear (Lim, Zhao, Tondeur, Chai, & Tsai, 2013)
- Or has been shown to have only a low average effect size (of 0.3 from a large-scale second-order meta-analysis by Tamim, Bernard, Borokhovski, Abrami, & Schmid, 2011)
- Nevertheless, many studies (including early studies) have measured positive effects that have been shown to be statistically significant (for example, Wenglinsky, 1998; Schachter & Fargnano, 1999; Somekh et al., 2007)

The past – the potential for technology enhanced teaching and learning

- There are many technologies available and these vary quite considerably in their potential application to pedagogical needs and practices (Camilleri, 2021)
- The variety of technologies to support learning activities and apply in different contexts is wide
- The different technologies that have been used in one temporal context might not be so appropriate and applicable in another temporal context
- There has been a largely accepted way in which links between out-of-school and in-school practices exist in the past
- A past model of educational practice involved digital technologies, the roles of teachers, learners and parents and guardians in particular ways
- Technical and digital skills have in part been based on this agreed or accepted sharing of roles and responsibilities across schools and homes
- Technical and digital access have also been based on the agreement or acceptance of past roles

The present - what has changed during the Covid-19 pandemic

- The teaching medium has changed in many localities, largely from a face-to-face medium to an online medium
- The teaching mode has similarly been adapted – perhaps remote, or blended, or hybrid
- The learning medium for young people has changed from a face-to-face medium often to a screen, perhaps with associated and connected technologies
- The learning mode has also changed, to become more online, sometimes entirely online
- The learning environment in classrooms, with its associated routines and procedures, may have changed to a small bedroom, or a comfortable patio
- The support that goes with that environment may also have changed
- Parental and guardian roles have shifted

The future – taking forward lessons for the next phase

- The balance of face-to-face to online, of synchronous to asynchronous, and readiness of those involved will certainly be key questions to consider (Rolé & Gatt, 2021; Vassallo & Spiteri, 2021)
- Teachers will need to share experiences and practices (da Silva, 2021; Wang, 2021)
- For some young people, the learning medium of a screen has been problematic, while for others it has been a benefit
- The skills and competencies that learners do not have and yet need, in moving from a face-to-face environment, also requires focus (Grixti, 2021)
- For shifts towards more remote or blended or hybrid learning, important dependency factors within the learning environment will need to be identified (Calleja & Maggi, 2021; Vassallo et al., 2021; Wright, 2021):
 - Parental roles will need to be managed
 - Timing lengths and pace of sessions should be reconsidered (Premazzi & Quieroz, 2021)
 - Access and availability of digital technologies, as well as wider skills and competencies to use them (Caruana, 2021; Muscat, 2021)
 - Alternative forms of assessment (both formative and summative) and moderation (Said Pace, 2021)

In summary

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- What the future holds in terms of remote, blended and hybrid teaching and learning is in part open to our imaginations and capacities to engage
 - Whatever choices we make, decisions should have a focus on how we will address fundamental learning needs, such as those listed by Twining and McCormick (1999) – instruction, explanation and illustration, direction, demonstration, discussion, scaffolding, questioning, speculation, consolidation, summarising, initiating and guiding exploration, and evaluating learners’ responses
 - How we ensure creativity, enquiring, conceptualising, comparing, reasoning, collaborating and interpreting will need deep understanding about how we can apply and use digital technologies emerging from our research (Seguna, 2021)
 - But our understandings at this time are stronger than we might have hoped, due to the dedication of our learners, our teachers, our parents, our administrators, our advisers and our researchers
 - The Covid-19 pandemic has shown how practice, policy and research can and do work together in exploring and addressing the ‘impossible’; we should not lose the importance of that collaborative endeavour; it is a strength we should maintain

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Thank you for listening and I look forward
to the other sessions today!

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